THE PLOTTER

CLACKAMAS COMPUTER APPLIED
TRAINING SOCIETY
NEWS LETTER
****
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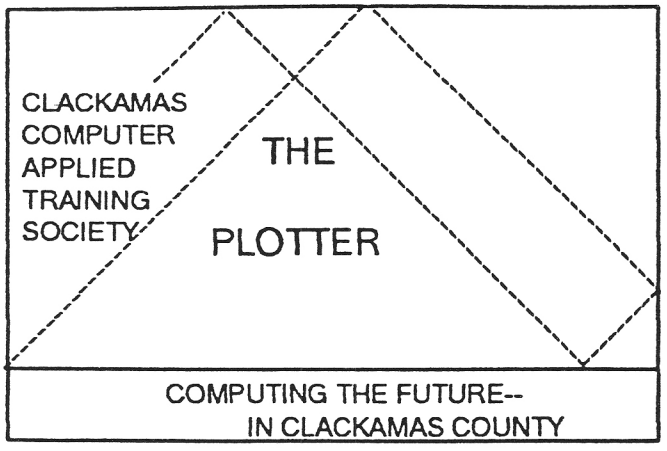
******
AUGUST 1994



MEETING

The AUGUST meeting will be:

on: SUN., AUGUST ~~17~~ 21, 1994

MEETING 2:00 TO 5:00 P.M.
at: Rod Gowen's home
14784 S. Quail Circle
Oregon City

WHAT YOU WILL FIND IN THIS ISSUE:

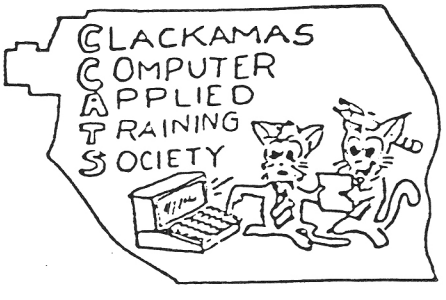
FROM THE EDITOR'S DESK

Well, the old Editor did it again. I used the same article in the May issue and the July issue. I must have been impressed with the usefullness of Jo Go. I probably printed the article 2 different times and kept both.

This month we continue the use of simple math puzzles as BASIC programs. I find them interesting to put in program form. Even simple litte things seem to take some experimenting to get in a suitable form.

I have also been using the MSDOS MSCRIPT program, learning some of the ins and outs that are different from the Dohany version for the 2068. Really interesting to see how simple it is. This program does not import fonts, or print in the graphic mode. In place of that it uses the resident fonts available in the computer. It does print faster because of not being in the graphic mode.

>> >>



Continued from page 1
Hopefully, the disk copies of the programs in our book, THE BEST OF THE PLOTTER, will soon be finished. As this is stricly volunteer effort, just as the assembly of the articles and programs was, it simply takes available time for someone to do it.

I didn't get very far with my experimnting with a desk top publisher program. What I want to accomplish is to have page one of The Plotter in a form that has the graphics imported as well as the first 35 lines of an article. The text on the left side would only require changes in the meeting date. The graphic line at the bottom of the page will probably be changed as that is a double wide character inputted as a character code. I now use MSCRIPT on the 2068 to do this page in pieces, printing the left side, then adding the top graphic with printing, and adding our 2 monkeys as a paste up. The article text is added later as a paste up. The very last is to add the table of contents as a paste up. Using a desk top publishing program means it will need to be done on an MSDOS computer.

And, we have a very good article on computers in the space program by Rod Gowen. It is indeed surprising that so much has happened in the space age.

ENERGY SAVERS

by: Rod Gowen

Here are a few tips that may be of interest to those of our readers who are trying to conserve energy--in whatever form. These are just a few things that I have learned over the years in trying to lower my electric bill each month. As my wife always asks "Why bother? If we use less, they just raise the price per unit so we can't win anyway." I disagree. The price of energy is going to go up whether we conserve or not. By learning to conserve, we will all save money (and energy/resources) over the long haul.

Most of my article here will deal with our computers and peripherals. I may touch on other items but only in that they are directly related to my computer operations.

When I decided to start looking for ways to cut the electric bill at our house, I started out by running around screaming and nagging at folks for leaving lights on and/or the television on in a room where no one was using or watching. After several years of this I finally have the daughters sort of "trained", but the wife is another story. Anyway, by these methods, we were able to save about 4-7% on the light bill. Next, I looked at what the biggest users of electricity are--heating, cooling and refrigeration. The single biggest user of electricity in an all-electric home is the water heater. Of course, this is affected by the clothes washer and dishwasher. If you can, run the dishwasher in energy saver mode. This just means that the dishes will "air dry" inside instead of being dried by heating elements. Just after the water heater as "energy hogs" comes the electric clothes dryer. Not much you can do here except to make sure that you run full loads and only use the applicable cycle for the load you are running.

Next, I moved on to the lighting in the house and tried to install fluorescent fixtures or go to quartz halogen where possible. Most importantly, keep lights off in rooms when you are not in them!

Now, to the computer room. Did you know that your printer can use up to 100 watts per hour just sitting there? Some less, some more, but if you only run your printer a couple of times a day, you can easily waste up to 1 kilowatt hour per day! And I run 4 printers! I used to leave them all on 24 hours a day! As you can imagine, they are now switched off unless they are running. I figure, based on actual figures from the printers' own specs, that I am saving about 3 kilowatt hours per

day! The monitor can also eat up a bit of energy. I have 3-4 monitors online. They run from 80 watts to 150 watts to operate and I also left them running 24 hours per day with screen savers on the IBM machines and with the brightness turned down on the T/S computers. Now, as with the printers, unless I am actually looking at the screen, the monitors are switched off (except for my main 386). Another 3 kilowatt hours per day in savings. If you have a 2068 or 1000 or even a QL, you would be wise to power it down when not using it. Even the lowly 1000 can eat about 1 kilowatt hour per week when left on 24 hours per day! Double that for the 2068 or 2040 printer! And, if you are using an IBM clone, the average power supply is now at 230 watts! That's almost 1 KWH every 4 hours! Some of us have to have our computers on for business reasons. If you are one of those who only gets around to using your IBM clone once or twice a week, it may be wise to power it down when not actually in use. I know, I know. I have long told my customers with hard drives, "DO NOT turn your computer off and on as it is hard on the hard drive!", but, if it is not done several times per day or week, it should not be too detrimental. If you are using an old MFM or RLL hard drive (pre-1991), you are more likely to have problems than if you are using a newer IDE drive. If you are going to be using your computer on a daily basis, I still recommend that you only power down if you are going to be away for more than 24 hours or if there are thunder storms in your area.

Do yourself and your environment a big favor and take a look at your home and especially your computer system to see if you can't afford to save a bit of electricity. I know to those of us lucky enough to be living in the great northwest, the cost may not seem so high at about a nickel per kilowatt hour, but those of you who live on the east coast can see, at somewhere between 15 and 25 cents per kwh, that it wouldn't take long to make some substantial savings.

LABEL MAKING WITH MSCRIPT

Dick F. Wagner

MSCRIPT, the word processor, available for the 2068 computer for some years thru Zebra until they discontinued selling it, and then available through Jack Dohany with many upgrades, is now on the MSDOS market through RBG Enterprises.

MSCRIPT, the predecessor to the 2068 issue, is essentially the same as that illustrated in the MSCRIPT manual for the 2068 computer. That manual has an addendum to match the changes for the 2068 use.

Some of the features incorporated in the MSCRIPT program make it possible to print out mailing labels, also other kinds of labels, in short order and no need for an extensive learning curve. This applies to the MSDOS version as well as the 2068 version.

Printing labels requires a set line length, number of lines, a set page length (number of lines available on the label + 1 for top and bottom margins, etc., left margin, and tab settings (for the start of text on each label if more than 1 label per line). All of this is easily set up with MSCRIPT for proper printing.

A popular mailing label is 15/16 x 3 1/2 inches in one label wide format for tractor feed. These labels are on a 1 inch center so there is 1/32 inch space between labels. As there are 6 lines per inch (pica), it is possible to put 5 lines on a label, leaving 1/12 inch for top and bottom margins and space to the next label.

The setup for this format is a left margin of 0, leaving an actual margin of 1/4 inch if the labels are positioned in the tractor feed for a 0 margin. Line length can be calculated for the longest line, or just set it at 3 inches or 30 characters. Actually an end-of-line marker is used for each line while typing the labels. Page length is set at 6 lines and page space is set at 0 so the page length controls the label printing.

When typing the lines be sure and pad the unprinted lines so there are 5 line spaces. This is done with the ENTER key. Actually, if there is only one label it would not be necessary to pad the empty lines, but with multiple labels the printer doesn't know where the next label starts other than after 6 lines.

With the same method, one can print small labels such as for part numbers, that might have space for 2 lines. I know of one such label that is 1 1/4 inches long and 3/8 wide. These labels are on 1/2 inch centers. Or you can go the other way and make labels for 5 1/4 floppies or 3 1/2 inch floppies.

Labels like the 3/8 x 1 1/4 size produce a printing problem as 6 lines per inch do not exactly fit this label. The solution is to enter the proper printer code in the beginning of the text that re-sets the number of lines per inch, or line spacing. This is easily accomplished with MSCRIPT.

OK, what is the correct line spacing? Epson printers variously use these variables, 1/360, 1/216, 1/180, 1/72, and 1/60. The 1/60 variable is not suitable in this example as it produces the 6 lines per inch printing.

These variables will work from correct to fair: 52/360 or 53/360 (prefered), 31/216 or 32/216, 32/216 prefered, 26/180 or 27/180, 26/180 prefered, and 10/72 or 11/72. If 10/72 is used, the line spacing will be off 0.007 inches per line. If 11/72 is used, the line spacing will be off 0.006 inches per line.

HEALTH DANGER!

Dick Wagner

A recent article in our local newspaper answered some questions concerning intense excercise (also strenuous labor?) under high heat-humidity conditions.

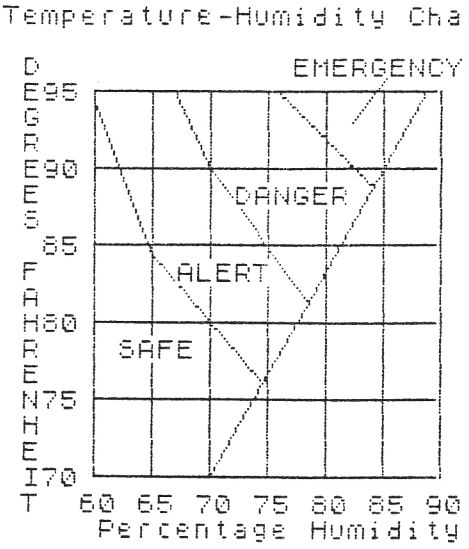
We do not experience the conditions in the Northwest west of the Cascade mountain range that would be identified as DANGER and EMERGENCY. It would seem to be of interest for the Atlantic and some Mid continental regions so I considered it to be of timely interest for some weeks.

Michael O'Shea, Ph.D. has developed this information in conjunction with his Sports Training Institute.

His advice--the symptoms of heat exhaustion includes a weak and rapid pulse, headache, dizziness and general weakness. (If you experience these symptoms while excercising, stop and move to a cool spot). Heat stroke is much more serious. The skin becomes dry and hot, and the circulatory system is under great strain. Death can result. Immediate medical attention is required.

Dr. Gregory B. Lorls, medical director of emergency services for Providence Medical Center, Portland, OR recommends that special precautions be taken when temperatures are over 90 degrees F. and relative humitity is higher than 75%. The body, controlled by the brain, has a built-in air conditioner that may require special precautions to work efficiently. The blood vessels dilate to carry more blood close to the surface of the skin so it has a chance to cool. Thus the flushed appearance at times.

Sweat glands open up to wet down the outside of the body. Evaporation carries off the sweat. Cooling the skin cools the underlying blood vessels. High humidity retards the evaporation process.




```
 10 REM 7/27/94 by Dick Wagner
 100 PRINT AT 1,3;"Temperature-H
umidity Chart"
 150 PLOT 38,20: DRAW 0,120
 160 PLOT 62,20: DRAW 0,120
 170 PLOT 86,20: DRAW 0,120
 180 PLOT 110,20: DRAW 0,120
 190 PLOT 134,20: DRAW 0,120
 200 PLOT 158,20: DRAW 0,120
 210 PLOT 182,20: DRAW 0,120
 230 REM print horizontaL lines
 240 PLOT 38,20: DRAW 142,0
 250 PLOT 38,44: DRAW 142,0
 260 PLOT 38,68: DRAW 142,0
 270 PLOT 38,92: DRAW 142,0
 280 PLOT 38,116: DRAW 142,0
 290 PLOT 38,140: DRAW 142,0
 300 PRINT AT 20,4;"60";AT 20,7;
"65";AT 20,10;"70";AT 20,13;"75"
;AT 20,16;"80";AT 20,19;"85";AT
20,22;"90"
 310 PRINT AT 21,5;"Percentage H
umidity"
 350 PRINT AT 4,2;"95";AT 7,2;"9
0";AT 10,2;"85";AT 13,2;"80";AT
16,2;"75";AT 19,2;"70"
 370 PRINT AT 3,1;"D";AT 4,1;"E"
;AT 5,1;"G";AT 6,1;"R";AT 7,1;"E
";AT 8,1;"E";AT 9,1;"S"
 380 PRINT AT 11,1;"F";AT 12,1;"
A";AT 13,1;"H";AT 14,1;"R";AT 15
,1;"E";AT 16,1;"N";AT 17,1;"H";A
T 18,1;"E";AT 19,1;"I";AT 20,1;"
T"
 400 PLOT 86,20: DRAW 90,120
 450 PLOT 107,50: DRAW -45,39
 460 DRAW -24,47
 470 PLOT 127,74: DRAW -41,42
 480 DRAW -15,24
 490 PLOT 154,110: DRAW -39,29
 500 PRINT AT 14,6;"SAFE"
 510 PRINT AT 11,9;"ALERT"
 520 PRINT AT 8,12;"DANGER"
 530 PRINT AT 3,20;"EMERGENCY"
 540 PLOT 145,130: DRAW 14,14
```

A LADDER RUNG PROBLEM

by Dick Wagner

This little problem about the number of rungs in a ladder was presented in our local newspaper in an article about The Problem With Math in Oregon Schools. It seemed like a nice problem for an adult to present to a student of almost any age, if State educators are correct in expecting a 3rd year student would be able to solve it. A computer is not a necessary tool in arriving at a solution, it is just convenient to present the problem as a computer program. The solution I came up with is given by keying in RUN 400.

```
  1 REM
 10 REM DICK WAGNER 7/27/94
 100 PRINT "STORY PROBLEM"
 200 PRINT "A firefighter stood
on the mid- dle rung of a ladder
 pouring    water on a burning b
uilding. As the smoke cleared, h
e stepped upthree rungs."
 205 PRINT
 210 PRINT "But a sudden flair-u
p forced himdown five rungs. Lat
er he       climbed seven rungs
where he    worked until the fir
e was out."
 215 PRINT
 220 PRINT "Then he climbed the
remaining   six rungs to the top
 of the     ladder and stood on
the roof."
 225 PRINT : PRINT "Give your an
swer as 2 digits."
```

```
 230 PRINT "How many rungs did t
he lad-      der have?"
 310 INPUT R
 315 PRINT : PRINT R: PRINT
 320 IF R <23 OR R>23 THEN PRINT
 "WRONG. TRY AGAIN.": GO TO 225
 330 IF R=23 THEN PRINT "RIGHT,
THE ANSWER IS 23! NOW EXPLAIN YO
UR REASONING."
 380 STOP
 390 REM RUN 400 TO CALCULATE TH
E ANSWER
 400 REM B IS THE CENTER RUNG
 410 LET B=0
 420 LET C=B+3: REM  UP 3 RUNGS
 430 LET D=C-5: REM  DOWN 5 RUNG
S
 440 LET E=D+7: REM  UP 7 RUNGS
 450 LET F=E+6: REM  UP 6 RUNGS
 460 LET R=F*2+1: REM  SUM OF RU
NGS ABOVE MIDDLE RUNG X 2 + MIDD
LE RUNG
 470 PRINT R
   1 REM
  10 PRINT "THE BROKEN CLOCK FAC
E"''
  20 REM BY DICK WAGNER, 7/94
 100 PRINT "Enter numbers from t
his list    that will add up to
1/2 of the  clock face."''
 110 FOR H=1 TO 12
 120 PRINT H
 125 NEXT H
 128 PRINT : PRINT "Input your c
hoice of 6 numbers."
 130 INPUT A: INPUT B: INPUT C
 140 INPUT D: INPUT E: INPUT F
 200 LET T=A+B+C+D+E+F
 210 PRINT : PRINT "THE SUM IS "
;T
 300 IF T<>39 THEN PRINT "TRY AN
OTHER COMBINATIOn. Press  RUN"
 310 IF T=39 THEN PRINT "CORRECT
, THIS IS 1/2 OF THE     CLOCK F
ACE"
 320 IF T=39 THEN PRINT "THE OTH
ER HALF OF THE NUMBERS IS 10,11,
12,1,2,3, OR 4,5,6,7,8,9 "
```

THE BROKEN CLOCK FACE

by Dick Wagner

Here is another math puzzle from Marilyn Vos Savant. The puzzle description is hers, the program is mine. The program is not essential to solving it, but it makes it more interesting.

"In a small Swiss village, there was an enormous old clock on a tower that loomed over the market square. One day a storm blew off the clock and sent it sailing away, until it crashed in an empty field. The town watchmaker, who had been out of work since everyone went digital, forlornly watched the clock hit the ground and break neatly in half. However, he also noticed something unusual about it, so he buried the pieces and created the following puzzle, which he hoped would restore his fame and fortune: how was the clock face split so the six numerals on each half added up to the same total??"

```
   1 REM
  10 PRINT "THE BROKEN CLOCK FAC
E"''
  20 REM BY DICK WAGNER, 7/94
 100 PRINT "Enter numbers from t
his list    that will add up to
1/2 of the  clock face."''
 110 FOR H=1 TO 12
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 128 PRINT : PRINT "Input your c
hoice of 6 numbers."
 130 INPUT A: INPUT B: INPUT C
 140 INPUT D: INPUT E: INPUT F
 200 LET T=A+B+C+D+E+F
 210 PRINT : PRINT "THE SUM IS "
;T
 300 IF T<>39 THEN PRINT "TRY AN
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 310 IF T=39 THEN PRINT "CORRECT
, THIS IS 1/2 OF THE     CLOCK F
ACE"
 320 IF T=39 THEN PRINT "THE OTH
ER HALF OF THE NUMBERS IS 10,11,
12,1,2,3, OR 4,5,6,7,8,9 "
```

Editor's Note: When making a LLISTing with JLO systems, I use LET /P=0, POKE 23324,10 for line feed, and POKE 23323,32 for line length (32). If the first line is over 32 characters I usually add a 1 REM to initialize the printer so line length will stop at 32.

SIERPIEN 1994

NI	PO	WT	SR	CZ	PI	SO
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

POLAND

WRZESIEN 1994

Monthly Calendar

PAZDZIERNIK 1994

NI	PO	WT	SR	CZ	PI	SO
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

NIEDZIEL	PONIEDZI	WTOREK	SRODA	CZWARTEK	PIATEK	SOBOTA
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

This month we are providing a calendar for Polish September, 1994. It should be handy for INTERNET as well as world-wide FAX users. Just nail a copy on your office wall for convenient use. You can count on THE PLOTTER to keep you up to date.

—NOTICE—

Opinions expressed in articles are not necessarily those of members of the Clackamas Computer Applied Training Society . Meeting minutes carry the consensus of members present at meeting. This newsletter nor staff will not be held liable for any damage or consequences due to following instructions, or review of products as contained in this newsletter

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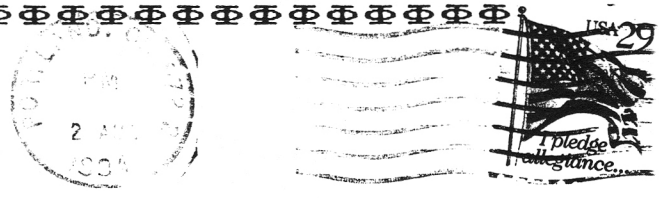

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